CLAIMS

What is claimed is:

1. An integrated circuit including an electrical over stress shunt, comprising:

a voltage threshold detector to detect an electrical over stress event wherein a potential is measured between a higher potential power rail and a lower potential ground rail in excess of a predetermined voltage; and

a switchable low resistance path between said power rail and said ground rail, said low resistance path being adapted to be switched ON for a duration of said electrical over stress event.

2. The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

3. The integrated circuit including an electrical over stress shunt according to claim 2, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

4. The integrated circuit including an electrical over stress shunt according to claim 3, wherein:

said low resistance path is adapted to be switched ON for longer than 4000 microseconds.

5. The integrated circuit including an electrical over stress shunt according to claim 1, further comprising:

a driver between said voltage threshold detector and said switchable low resistance path.

6. The integrated circuit including an electrical over stress shunt according to claim 5, wherein:

said driver comprises a series connection of a plurality of inverters.

7. The integrated circuit including an electrical over stress shunt according to claim 1, wherein said switchable low resistance path comprises:

a MOSFET transistor.

8. The integrated circuit including an electrical over stress shunt according to claim 1, wherein:

said integrated circuit includes a Firewire IEEE 1394 interface.

9. In an integrated circuit, a power distribution system comprising:

a power rail;

a ground rail; and

an electrical over stress shunt connected between said power rail and said ground rail, said electrical over stress shunt being capable of causing a low resistance path to be turned on between said power rail and said ground rail for an entire duration of when a potential of said power rail becomes greater than a potential of said ground rail by more than a predetermined threshold.

10. In an integrated circuit according to claim 9, wherein:

said integrated circuit is based on 3.3 v technology.

11. In an integrated circuit according to claim 9, wherein:

said predetermined threshold is at least 5 volts.

12. In an integrated circuit according to claim 9, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

13. In an integrated circuit according to claim 12, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

14. In an integrated circuit according to claim 9, wherein said low resistance path comprises:

a MOSFET transistor.

15. A method of providing robustness to an electrical circuit from an electrical over stress event, said method comprising:

detecting an EOS condition wherein a potential of a power rail of said electrical circuit becomes greater than a potential of a ground rail of said electrical circuit by more than a predetermined threshold; and

turning ON a low resistance path between said power rail and said ground rail for a duration of an occurrence of said detected EOS condition.

16. The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:

said predetermined threshold is at least 5 volts.

17. The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 15, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

18. The method of providing robustness to an electrical circuit from an electrical over stress event according to claim 17, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

19. Apparatus for providing robustness to an electrical circuit from an electrical over stress event, comprising:

a means for detecting an EOS condition wherein a potential of a power rail of said electrical circuit becomes greater than a potential of a ground rail of said electrical circuit by more than a predetermined threshold; and

a means for turning ON a low resistance path between said power rail and said ground rail for a duration of an occurrence of said detected EOS condition.

20. The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:

said predetermined threshold is at least 5 volts.

21. The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 19, wherein:

said low resistance path is adapted to be switched ON for significantly longer than 2 microseconds.

22. The apparatus for providing robustness to an electrical circuit from an electrical over stress event according to claim 21, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

23. A circuit including an electrical over stress shunt, comprising:

a voltage threshold detector to detect an electrical over stress event wherein a potential is measured between a higher potential power rail and a lower potential ground rail in excess of a predetermined voltage; and

a switchable low resistance path between said power rail and said ground rail, said low resistance path being adapted to be switched ON for a duration of said electrical over stress event.

24. The circuit including an electrical over stress shunt according to claim 23, wherein:

said low resistance path is adapted to be switched ON for longer than 1000 microseconds.

25. The circuit including an electrical over stress shunt according to claim 23, further comprising:

a Firewire IEEE 1394 interface.